California Spanish Assessment
Accessibility Supports for Operational Testing

Contract # CN150012

Prepared for the California Department of Education by Educational Testing Service
Updated September 14, 2018

Contents

Introduction

The goal of the California Department of Education (CDE) is to provide every student with a positive and productive testing experience that allows the student to demonstrate what he or she knows and can do. California encourages and values bilingualism and biliteracy. A valid assessment that provides accurate measurement of a student's academic achievement in Spanish reading/language arts is one of multiple sources of information that can be used to improve student learning and support bilingualism across the state. The California Spanish Assesment (CSA) is being developed as the primary language assessment pursuant to California *Education Code* (*EC*) Section 60640 (j), which says that the CDE may make available to local educational agencies (LEAs) a primary language assessment aligned with the adopted common core standards in English language arts.

In order to ensure that all students, including English learners (ELs), Spanish learners (SLs), and students with disabilities have a fair opportunity to demonstrate what they know, it is necessary that assessments be designed to be inclusive for a diverse student population.

Educational Testing Service (ETS) and the CDE have collaborated in establishing guidelines for assessment development for the CSA that follow an approach consistent with the Smarter Balanced Assessment Consortium's *Accessibility and Accommodations Framework* (Smarter Balanced, 2014). The principles of universal design have been applied in the development of the CSA items to make them accessible for a wide range of student accessibility needs.[1] This document presents the lists of universal tools, designated supports, and accommodations for the operational CSA assessment that are aligned to the *California Common Core State Standards en Español (CA CCSS en Español)*, pending adoption of the California Assessment of Student Performance and Progress (CAASPP) regulations by the Office of Administrative Law.

---

[1] Universal design principles are guidelines that take into account best practices to make content accessible for test takers. Universal design assessment principles provide guidelines for test developers, ranging from acknowledging the target population, defining the construct, and recommendations for test directions and content presentation (see Thompson, Johnstone, and Thurlow, 2002, pp. 6–20, for more information).

A Three-tiered Approach to Accessibility

Recent educational reforms and technological advances have led to new approaches to accessibility. As a result, students who may not have received accommodations in the past may now benefit from needed accessibility supports both in instruction and on assessments. The Smarter Balanced three-tiered framework for accessibility was developed with extensive input from national experts as well as state-level representatives from the consortium. The framework is based on a thorough literature review, which included ratings of commonly available resources and incorporated findings from cognitive labs, pilot, and field test (Smarter Balanced, 2014, p. 4).

A three-tiered approach, similar to that used by Smarter Balanced, will apply to the CSA in order to address a wider range of student needs than did the previous generation of paper-based assessments and to support a more personalized and inclusive testing experience. In addition to a review of the Smarter Balanced documentation, ETS consulted with Spanish language arts content experts and nationally recognized accessibility experts to develop the lists of the universal tools, designated supports, and accommodations for use on the operational CSA.

The following three tiers include embedded supports, which are delivered digitally through the online testing interface, and non-embedded supports, which are provided locally:

- **Universal tools**—Features that are available to all students on the basis of student preference and selection

- **Designated supports**—Features that are available for use by any student for whom the need has been indicated by an educator or team of educators (with parent/guardian and student input as appropriate)

- **Accommodations—**Changes in procedures or materials that increase equitable access during testing for students who need them, based on documentation of the need for the accommodations via an individualized education program (IEP) or Section 504 plan, resulting in the generation of valid assessment results.

Specific Assessment and Accessibility Considerations for the *California CCSS en Español*

The foundation of any assessment is the content standards on which the test is based. The Spanish version of the Common Core State Standards, *California Common Core Standards en Español,* was developed as a joint effort between the San Diego County Office of Education, Council of Chief State School Officers, and the CDE.

The *California Common Core State Standards en Español* are a translated and linguistically augmented version of the English-language Common Core State Standards (CCSS) for English language arts/literacy (ELA). The use of these standards reinforces the premise that language arts instruction in Spanish should be commensurate with the instruction of language arts in English, a fundamental goal of bilingual/biliterate education.

The development of a computer-based Spanish language arts assessment like the CSA provides a new and innovative approach in delivering and measuring the Spanish language arts construct because, historically, Spanish language arts tests have been paper-based assessments like the Standards-based Tests in Spanish. Solutions include delivery of the listening component to assess students' comprehension of spoken Spanish in a range of contexts and options for future inclusion of full writing components.

Ongoing research with national accessibility experts is being conducted to investigate ways to develop these item types and make them accessible to a wide range of students, including students with disabilities and ELs. ETS research staff are actively engaged in the accessibility standards work of both the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0 level AA—which are essential for supporting assistive technologies used by students with disabilities—and Instructional Management Systems (IMS) Global Learning Consortium (GLC), with a particular focus on ensuring that standards and best practices are developed that support the needs of all students interacting with emerging technology items. Further, ETS accessibility researchers have conducted a range of studies that explore design approaches to address key challenges associated with innovative items (Hansen, et al., 2016, January; White & Hakkinen, 2016; and Hansen, et al., 2016, July).

Accessibility Supports and Their Recommended Use in Operational Assessments

ETS experts in Spanish language arts content and accessibility have reviewed the Smarter Balanced ELA supports for their appropriateness to the Spanish content, and found that most of the supports are also appropriate for Spanish.

Tables 1, 2, and 3 list the embedded and non-embedded universal tools, designated supports, and accommodations, respectively, with their recommended use for the operational CSA. ETS will continue to conduct research and collaborate with experts to inform further refinements for the available supports as needed.

Table 1: CSA Accessibility Supports—Universal Tools:

Universal tools are accessibility features of the assessment that are available to all students based on student preference and selection (Smarter Balanced, 2016, p. 6).

Universal Tool	Embedded	Non-embedded
Breaks	X	X
Digital notepad	X	NA
Expandable passages	X	NA
Expandable items[2]	X	NA
Highlighter	X	NA
Keyboard navigation	X	NA
Line reader	X	NA
Mark for review	X	NA
Scratch paper	NA	X
Strikethrough	X	NA
Writing tools (e.g., bold, italic, bullets, undo/redo)[3]	X	NA
Spanish dictionary	NA	X
Spanish glossary	X	NA
Zoom (in/out)	X	NA

[2] The expandable items universal tool is turned on by the test administrator in the Test Administrator Interface.

[3] Writing tools will be used with full-write items if full-write items become a part of future versions of the CSA.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

Table 2: CSA Accessibility Supports—Designated Supports

Designated supports are accessibility features that are available for use by any student for whom the need has been indicated by an educator or team of educators (with parent/guardian and student input as appropriate) (Smarter Balanced, 2016, p. 9)

Designated Support	Embedded	Non-embedded	Recommendations for Use
Amplification	NA	X	Students may use amplification assistive technology (e.g., headphones, FM System, noise buffers, white noise machines) to increase the volume provided in the assessment platform. Use of this resource likely requires a separate setting. If the device has additional features that may compromise the validity of the test (e.g., internet access), the additional functionality must be deactivated to maintain test security.
Color contrast	X	X	Students with attention difficulties may need this support for viewing test content. It also may be needed by some students with visual impairments or other print disabilities (including learning disabilities). Choice of colors should be informed by evidence that color selections meet the student's needs.
Color overlay	NA	X	Students with attention difficulties may need this support to view test content. This support may also be needed by some students with visual impairments or other print disabilities (including learning disabilities). Choice of color should be informed by evidence of those colors that meet student's needs.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

Designated Support	Embedded	Non-embedded	Recommendations for Use
Magnification	NA	X	The size of specific areas of the screen (e.g., text, formulas, tables, graphics, and navigation buttons) may be adjusted by the student with an assistive technology device. Magnification allows increasing the size to a level not provided for by the Zoom universal tool. The use of this support may result in the student needing additional overall time to complete the assessment.
Masking	X	NA	Students with attention difficulties may need to mask content not of immediate need or that may be distracting during the assessment. This support also may be needed by students with print disabilities (including learning disabilities) or visual impairments.
Medical device	NA	X	Students may have access to an electronic device for medical purposes (e.g., Glucose Monitor). The device may include a cell phone, and should only support the student during testing for medical reasons. Educators should follow local policies regarding medical devices and ensure students' health is the highest priority. Device settings must restrict access to other applications or the test administrator must closely monitor the use of the device to maintain test security. Use of electronic devices may require a separate setting to avoid distractions to other test takers and to ensure test security.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

Designated Support	Embedded	Non-embedded	Recommendations for Use
Mouse pointer (size and color)	X	NA	Students who are visually impaired and need additional enlargement or a mouse in a different color to more readily find their mouse pointer on the screen will benefit from the Mouse Pointer support. Students who have visual perception challenges will also find this beneficial. The size and color are set during registration and cannot be changed during the administration of the assessment. Students should have ample opportunity to practice during daily instruction with the size and color to determine student preference. The Mouse Pointer can be used with the Zoom universal tool. If students are using a magnification program, the enlarged mouse pointer is built into magnification programs and Mouse Pointer may not be needed.
Noise buffers	NA	X	Student (not groups of students) wears equipment to reduce environmental noises. Students may have these testing variations if regularly used in the classroom. Students who use noise buffers will need headphones unless tested individually in a separate setting.
Permissive Mode	X	NA	Permissive mode is a test setting that should be enabled for students who require access to approved accessibility software and/or devices in order to interact with the test (e.g., screen readers, magnifiers, speech-to-text, braille screen readers, and refreshable braille displays, etc.). When permissive mode is disabled, the only application that can be open on the computer is the secure browser.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

Designated Support	Embedded	Non-embedded	Recommendations for Use
Read aloud for items	NA	X	Students who are struggling readers may need assistance accessing the assessment by having all or portions of the assessment read aloud. This support also may be needed by students with reading-related disabilities. The use of this support may result in the student needing additional overall time to complete the assessment.
Scribe (nonwriting items)	NA	X	Students who have documented significant motor or processing difficulties, or who have had a recent injury (such as a broken hand or arm) that make it difficult to produce responses may dictate their responses to a human who records verbatim what they dictate. The use of this support may result in the student needing additional overall time to complete the assessment.
Separate setting (e.g., most beneficial time, special lighting or acoustics, adaptive furniture)	NA	X	Students who are easily distracted (or may distract others) in the presence of other students, for example, may need an alternate location to be able to take the assessment.
Simplified test directions	NA	X	The test administrator simplifies or paraphrases the test directions found in the test administration manual according to the Simplified Test Directions Guidelines.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

Designated Support	Embedded	Non-embedded	Recommendations for Use
Streamline	X	NA	This designated support provides a streamlined interface of the test in an alternate, simplified format in which the items are displayed below the stimuli vertically. This support includes zoom levels greater than 3X in the student interface. This support may benefit a small number of students who have specific learning and/or reading disabilities in which the test is presented in a more sequential format.
Text-to-speech (items)	X	NA	Students who are struggling readers may need assistance accessing the assessment by having all or portions of the assessment read aloud. This support also may be needed by students with reading-related disabilities, or by students who are blind and do not yet have adequate braille skills. Note: Students who use text-to-speech will need headphones unless tested individually in a separate setting.
Turn off any universal tool(s)	X	NA	Students who are easily distracted (whether or not designated as having attention difficulties or disabilities) may be overwhelmed by some of the universal tools. Knowing which specific tools may be distracting is important for determining which tools to turn off.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

Table 3: CSA Accessibility Supports—Accommodations

Accommodations are available to students who have a documented need for the accommodations via an individualized education program (IEP) or Section 504 plan (Smarter Balanced, 2016, p. 16).

Accommodation	Embedded	Non-embedded	Recommendations for Use
Alternate response options	NA	X	Students who have some physical disabilities (including both fine motor and gross motor skills) may need to use the alternate response options accommodation. Some alternate response options are external devices that must be plugged in and be compatible with the assessment delivery platform.
Audio transcript (listening passages)	X	NA	Students may have difficulty hearing the listening portion of the passage and also do not have enough functional vision to read the closed captioning provided for the passage. These students who are visually impaired or blind and deaf or hard of hearing AND who use braille may have access to Audio Transcripts. These students must be registered in TOMS for both Braille and Closed Captioningzt . The use of this accommodation may result in the student needing additional overall time to complete the assessment.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

Accommodation	Embedded	Non-embedded	Recommendations for Use
Braille (embossed and refreshable)	X	NA	Students with visual impairments may read text via braille. Tactile overlays and graphics also may be used to assist the student in accessing content through touch. The use of this support may result in the student needing additional overall time to complete the assessment. If a student's language/presentation is set to Braille, there are no additional settings that need to be provided in order for embossing to be available.
Closed captioning	X	NA	Students who are deaf or hard of hearing and who typically access information presented via audio by reading words that appear in synchrony with the audio presentation may need this support to access audio content. For many students who are deaf or hard of hearing, viewing words is how they access information presented orally. It is important to note, however, that some students who are hard of hearing will be able to listen to information presented orally if provided with appropriate amplification and a setting in which extraneous sounds do not interfere with clear presentation of the audio presentation in a listening test.
Print on demand[4]	NA	X	Some students with disabilities may need paper copies of either passages/stimuli and/or items. The use of this accommodation may result in the student needing additional time to complete the assessment.

---

[4] To set, e-mail caltac@ets.org.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

Accommodation	Embedded	Non-embedded	Recommendations for Use
Read aloud for reading passages	NA	X	Read aloud is available as an accommodation for students whose need is documented in an IEP or Section 504 plan. A student should have the option of asking a reader to slow down or repeat text.
Scribe (for writing items)[5]	NA	X	Students who have documented significant motor or processing difficulties, or who have had a recent injury (such as a broken hand or arm) that makes it difficult to produce responses may need to dictate their responses to a human, who then records the students' responses verbatim. The use of this accommodation may result in the student needing overall additional time to complete the assessment. For many of these students, dictating to a human scribe is the only way to demonstrate their composition skills. It is important that these students be able to develop planning notes via the human scribe, and to view what they produce while composing via dictation to the scribe.
Text-to-speech (reading passages)	X	NA	This accommodation is appropriate for a very small number of students. Students who use text-to-speech will need headphones unless tested individually in a separate setting. The use of this accommodation may result in the student needing additional time to complete the assessment.

---

[5] Scribe will be used with full-write items if full-write items become a part of future versions of the CSA.

These accessibility supports are intended for use in the CSA operational administration pending regulatory approval by the Office of Administrative Law.

References

Abedi, J., & Ewers, N. (2013, February). *Smarter Balanced Assessment Consortium: Accommodations for English language learners and students with disabilities: A research-based decision algorithm*. Retrieved from https://portal.smarterbalanced.org/library/en/accommodations-for-english-language-learners-and-students-with-disabilities-a-research-based-decision-algorithm.pdf

AERA, APA, NCME, & Joint Committee on Standards for Educational and Psychological Testing. (2014). *Standards for educational and psychological testing.* Washington, DC: American Educational Research Association.

California Department of Education. (2016). *Matrix one: Universal tools, designated supports, and accommodations for CAASPP*. Sacramento, CA: California Department of Education. Retrieved from http://www.cde.ca.gov/ta/tg/ai/caasppmatrix1.asp

Dean, V. J., & Martineau, J. (2012). *A state perspective on enhancing assessment and accountability systems through systematic implementation of technology.* In H. Zhao & R. Lissitz (Eds.), *Computers and their impact on state assessments* (pp. 55–77). Charlotte, NC: Information Age Publishing, Inc.

Guzman-Orth, D. (2014, April). PARCC item development: Usability of new item types for English learners. In C. Laitusis (Chair), *Research and Development to Ensure Accessibility for the Partnership for Assessment of Readiness for College and Careers Assessments.* Symposium conducted at the meeting of the National Conference on Student Assessment, Council of Chief State and School Officers Annual Conference, New Orleans, LA.

Guzman-Orth, D., Laitusis, C., Thurlow, M., & Christensen, L. (2016). *Conceptualizing accessibility for English language proficiency assessments* (Research Report No. RR-16-07). Princeton, NJ: Educational Testing Service. Retrieved from http://dx.doi.org/10.1002/ets2.12093

Guzman-Orth, D., Lopez, A. A., & Tolentino, F. (2016a). *Accessibility and accommodations for Spanish language assessments*. Manuscript in preparation.

Guzman-Orth, D., Lopez, A. A., & Tolentino, F. (2016b). *A conceptual framework for the assessment of young dual language learners in the United States.* Manuscript submitted for publication.

Guzman-Orth, D., Lopez, A. A., Tolentino, F., Sova, L., & Stolow, A. (2016). Considerations in assessing dual language learners. *Paper presented at the California Education Research Association Annual Conference, Sacramento, CA.*

Guzman-Orth, D., Wolf, M., King, T., & Tolentino, F. (2016). *Illustrations Glossaries for English Learners: Findings from Cognitive Labs*. In R. Kachchaf (Chair), *Designing Illustrations Glossaries for Special Populations in a National Large-Scale Mathematics Assessment*. Symposium conducted at the Annual Meeting of the American Educational Research Association, San Antonio, TX.

References

Hansen, E. G., Cavalie, C., King, T., Hakkinen, M. T., White, J. J., & Grant, J. (2016, July). Towards accessible innovative assessment items. In *International Conference on Computers Helping People with Special Needs* (pp. 251–58). Springer International Publishing.

Hansen, E. G., Liu, L., Rogat, A., Hakkinen, M. T., & Darrah, M. (2016, January). Designing innovative science assessments that are accessible for students who are blind. *Journal of Blindness Innovation and Research*, *6*(1).

IMS Global Learning Consortium. *Accessible Portable Item Protocol® (APIP®).* Retrieved from https://www.imsglobal.org/apip/index.html

King, T. (2014, April). *PARCC Item Development: Usability of New Item Types for Students with Disabilities.* In C. Laitusis (Chair), *Research and Development to Ensure Accessibility for the Partnership for Assessment of Readiness for College and Careers Assessments.* Symposium conducted at the meeting of the National Conference on Student Assessment, Council of Chief State and School Officers Annual Conference, New Orleans, LA.

Laitusis, C. C., Buzick, H., Stone, E., Hansen, E., & Hakkinen, M. (2012). *Literature review of testing accommodations and accessibility tools.* Commissioned report for the Smarter Balanced Assessment Consortium. Retrieved from https://www.smarterbalanced.org/wp-content/uploads/2015/08/Smarter-Balanced-Students-with-Disabilities-Literature-Review.pdf

Laitusis, C. C., & Cook, L. L. (Eds.). (2007). *Large-scale assessment and accommodations: What works?* Arlington, VA: Council for Exceptional Children.

Shyyan, V., Thurlow, M., Christensen, L., Lazarus, S., Paul, J., and Touchette, B. (2016). *CCSSO accessibility manual: How to select, administer, and evaluate use of accessibility supports for instruction and assessment of all students.* Washington, DC: CCSSO.

Smarter Balanced Assessment Consortium, Measured Progress, & National Center on Educational Outcomes. (2014, January 26). *Smarter Balanced Assessment Consortium: Accessibility and accommodations framework.* Retrieved from http://www.smarterbalanced.org/wp-content/uploads/2015/09/Accessibility-and-Accommodations-Framework.pdf

Smarter Balanced Assessment Consortium. (2016). *Smarter Balanced Assessment Consortium: Usability, accessibility, and accommodations guidelines.* Los Angeles, CA: Smarter Balanced Assessment Consortium. Retrieved from http://www.smarterbalanced.org/wp-content/uploads/2015/09/Usability-Accessibility-Accommodations-Guidelines.pdf

Thompson, S., Johnstone, C. J., & Thurlow, M. L. (2002). *Universal design applied to large scale assessments* (Synthesis Report 44). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

White, J., & Hakkinen, M. (2016). Meeting accessibility challenges with web components. *Presentation at the 31st Annual International Technology and Persons with Disabilities Conference. San Diego, CA.*

Bibliography

Hansen, E. G., Laitusis, C. C., Frankel, L., & King, T. (2012). Designing accessible technology-enabled reading assessments: Recommendations from teachers of students with visual impairments. *Journal of Blindness Innovation and Research, 2*(2). Retrieved from http://www.nfb-jbir.org/index.php/JBIR

Biographical Summaries, ETS Assessment Design Team Members

Dr. Kenji Hakuta

Dr. Kenji Hakuta is the Lee L. Jacks Professor of Education at Stanford University, where he teaches courses on language development, bilingual education, research methods, and statistics. He received his Ph.D. in Experimental Psychology from Harvard University in 1979, has held faculty positions at Yale University and the University of California at Santa Cruz, and served as the founding dean of the University of California, Merced. He currently serves as the co-chair of the Understanding Language Initiative that addresses the challenges and opportunities of the CCSS for English learners (ELs). Hakuta is a member of the National Academy of Education and the American Educational Research Association and a fellow of the American Association for the Advancement of Science. Hakuta's research is in the areas of psycholinguistics, bilingualism, language shift, and the acquisition of English in immigrant students. He is the author and editor of many articles and books, including *Mirror of Language: The Debate on Bilingualism* (1986) and *In Other Words: The Science and Psychology of Second Language Acquisition* (1994), both considered classics in the field. Besides research, Hakuta is professionally active in the areas of language policy, education of language-minority students, affirmative action in higher education, and improvement of quality in educational research. He has served on the boards of the Spencer Foundation and the ETS, and he chaired the National Educational Research Policy and Priorities Board of the U. S. Department of Education. He currently serves on the boards of the National Academy of Education and California Education Partners. Hakuta is actively involved in supporting the work of school districts and states around the country, and he leads several professional learning communities, including at school districts in rural central California and a learning community of state leaders organized by the Council of Chief State Schools Officers.

Dr. Guadalupe Valdés

Dr. Guadalupe Valdés is the Bonnie Katz Tenenbaum Professor of Education at Stanford University. Working in the area of applied linguistics, much of her work has focused on the English-Spanish bilingualism of Latinos in the United States and on discovering and describing how two languages are developed, used, and maintained by individuals who become bilingual in immigrant communities. Dr. Valdés has investigated Latino students in elementary, middle school, high school, and college, leading to six books and more than 70 articles. In the last several years, her work includes a number of articles, including "Toward an ecological vision of languages for all: The case of heritage languages" in A. Heining-Boynton's *Realizing Our Vision of Languages for All* (2006) and "Bilingualism, heritage learners and SLA research: Opportunities lost or seized" in the *Modern Language Journal* (2005). Valdés is also the coauthor of a best-selling Spanish language textbook that focuses on the teaching of Spanish to Hispanic bilinguals. *Español Escrito* (first published by Scribner in 1978 and now published by Prentice Hall) is now in its sixth edition. She was awarded the Joshua Fishman Award for Outstanding Contributions and Leadership in the Heritage Language Field from the National Heritage Language Resource Center at the University of

California, Los Angeles in 2010. Valdés is a member of the American Academy of Education, a fellow of the American Educational Research Association, and a member of the Board of Trustees of ETS. She serves on the editorial boards of a number of journals, including the *Review of Educational Research*, *Bilingual Review*, *Written Communication*, *Modern Language Journal*, and *Hispanic Journal of the Behavioral Sciences*. In May 2000, Valdés received an honorary doctorate from the University of Arizona for her work on the use of Spanish in the United States.

Dr. Patricia Baron

Dr. Patricia Baron, Lead Research Project Manager, has served as the standard-setting director, researcher, and lead facilitator in ETS's Center for Validity Research. In this role, she directs standard setting for ETS's K–12 testing programs. This experience includes providing consultation for the California Standardized Testing and Reporting program, the grades 2–11 Spanish-based assessments of reading and mathematics, the grades 3–11 and Educational Opportunity Center (EOC)–modified assessments, and the California Alternate Performance Assessment, in addition to directing standard setting and performance level descriptor development for the Tennessee EOC, the Proficiency Assessments for Wyoming Students, and the Wyoming Student Assessment of Writing Skills. Dr. Baron has also designed and conducted validation studies and evaluated the alignment of innovative item types to the CCSS. For the past seven years, she has focused on research in factors contributing to the variability in standard setting, the development of mixed methods in curriculum and standards validity studies for state assessments, and on the assessment of young ELs in the international context. Significantly, she completed design and implementation of a standard-setting tool for the Bookmark method, which provides a mechanism for expedited analysis and reporting with high quality assurance standards. Before transitioning into her current position, she worked as the director of Government Relations and Assessment Services, and she was a senior psychometrician in the Research and Development division, conducting hundreds of equating and scaling studies for 16 years. During her time at ETS, she has been the lead psychometrician on high-stakes undergraduate and graduate admissions tests, outcome assessments for college and higher level programs, and a national assessment for Qatar. She has led development of the vertical scale and test design and helped plan standard setting for Qatar in Arabic and English. She earned her Ed.D. and M.Ed. in Educational Psychology with a specialization in Educational Statistics and Measurement from Rutgers University, where she also earned her B.A. in Psychology.

Dr. Danielle Guzman-Orth

Dr. Danielle Guzman-Orth, Research Scientist, specializes in monolingual and bilingual assessments, with particular focus on accessibility and accommodations for ELs, including ELs at risk and ELs with disabilities. Along with her involvement in the California Assessment of Student Performance and Progress (CAASPP) primary language stakeholder meetings, Dr. Guzman-Orth has led and consulted on research studies for state and consortia contracts, such as the English Language Proficiency Assessments for California (ELPAC), Smarter Balanced, Partnership for the Assessment of Readiness for College and Careers, and English Language Proficiency Assessment for the 21st Century (ELPA21). Her current

research projects focus on improving assessment practices for young dual-language learners and ELs with disabilities. Before coming to ETS, she gained valuable classroom experience with ELs, ELs at risk, and ELs with disabilities in P-20 settings. She trained tutors to implement instructional interventions with ELs and students with disabilities, provided English language development instruction to ELs in first through sixth grade, and taught reading intervention for first grade ELs. She holds an M.A. and Ph.D. in Education with a specialization in Special Education, Disabilities, and Risk Studies from University of California, Santa Barbara and a B.A. in Psychology and English from California State University, Stanislaus.

Dr. Alexis A. López

Dr. Alexis A. López, Research Scientist, is focusing on the assessment of language proficiency and the assessment of content knowledge for K–12 ELs in the Center for English Language Learning and Assessment at ETS. For the past four years, Dr. López has conducted research on the use of translanguaging in content assessments, dual-language assessments, and technology-enhanced assessments. He has also led or coled research studies for state and consortia contracts, such as the ELPAC, the ELPA21, and the California English Language Development Test (CELDT) item alignment to the 2012 English Language Development Standards. He previously worked as an associate professor at Universidad de los Andes in Bogotá, Colombia, and as a test development specialist at Second Language Testing, Inc. in Washington, DC. He has participated in all facets of the test development process, including developing test specifications, item writing, field testing, standard setting, and conducting validation and alignment studies. He earned both his Ph.D. in Education and M.A. in Teaching English as a Second Language from the University of Illinois at Urbana-Champaign, and his B.S. in English and Spanish from the Universidad Pedagógica Nacional in Bogotá.

Dr. Ralph Morris

Dr. Ralph Morris, Assessment Director, is responsible for the supervision of ETS language arts staff, as well as for the development of language arts assessments in English and Spanish for CAASPP. His experience in assessment and content development will establish comprehensive and reliable subject material. Dr. Morris has worked in language arts assessment development at ETS for 10 years in roles of increasing responsibility, including as an assessment specialist, content lead, and assessment lead. Currently, he works as the language arts assessment director, where he is responsible for organizing, implementing, and distributing content assignments for contracts; managing the content area within projects while enforcing proper processes; and serving as the point of contact regarding product quality and personnel issues. Before joining ETS, he was a middle- and high-school world languages teacher (English as a Second Language, Spanish, French, and German). He earned his Ph.D. and M.A. from the University of Wisconsin–Madison with a major emphasis in Germanic Philology and Linguistics and a minor emphases in both Romance Philology and Linguistics and German Literature; he earned a B.A. in Modern Foreign Languages from Lee University.

Jason Gonzalez

Jason Gonzalez, Test Development Team Lead (TDTL), is responsible for overseeing the overall development schedule and process for the CSAs. Jason has over 11 years of experience working on numerous California state assessments, most notably as the TDTL on the Standards-based Tests in Spanish and the CELDT. Most recently, he helped schedule and organize the primary language, Digital Library, and fine arts stakeholder meetings. He joined ETS in 2002 and prior to the TDTL role, he was the lead editor on several large-scale assessments, including the California High School Exit Exam. His experience with California testing programs, especially with Spanish language assessments, gives him a unique insight into the intricacies of establishing a new statewide assessment for California.

Dr. Markku (Mark) Hakkinen

Dr. Markku (Mark) Hakkinen, Managing Senior Research Developer, is a research scientist in the Research and Development division at ETS, where he utilizes his expertise in addressing national and international accessibility standards for computer-based systems. At ETS, he works on a variety of accessibility and technology projects, including exploring accessibility challenges of tablet computers, gaming technologies, and our current computer-based testing platforms. During his career, Dr. Hakkinen has placed significant focus on nonvisual interfaces to information, based upon experience gained initially as a research programmer supporting psychoacoustics research at the Central Institute for the Deaf and from his early graduate research in speech-based warning systems. He earned both his Ph.D. and M.S. in cognitive science from the University of Jyväskylä in Finland and his B.S. in psychology from Washington University.

Dr. Cara Cahalan Laitusis

Dr. Cara Cahalan Laitusis, Research Director, is the principal investigator and project director at ETS for three grants from the U.S. Department of Education, all of which focus on improving state assessments for students with visual impairments, blindness, learning disabilities, or mild-to-moderate cognitive impairments. Dr. Cahalan Laitusis joined ETS in 1998, and her applied specializations are in curriculum-based assessment and the diagnosis and treatment of students with learning disabilities. She has been involved in research on the validity and fairness of assessments for all test takers. These projects have included field testing of new item types for students with disabilities on both the SAT® and GRE®, examining the validity of testing accommodations for students with disabilities on a variety of tests, investigating gender differences in mathematical problem-solving, and examining the comparability of paper- and computer-based test formats between gender and ethnic groups. Dr. Cahalan Laitusis has authored numerous research articles and coedited the book *Large Scale Assessment and Accommodations: What Works?*, which was published by the Council for Exceptional Children in 2007. She earned both her Ph.D. in urban school psychology and a M.S. in educational psychology from Fordham University, and her B.S. in psychology and African studies from Trinity College in Hartford, Connecticut.

Justine Pascalides

Justine Pascalides, ATF Manager, will be responsible for overseeing the development of the alternate test formats and facilitating nonvisual access to the computer-based tests for the Texas assessment program. For the past five years, Justine has worked at ETS as an assessment process manager, where she manages the development of alternate test formats and test preparation materials for test takers with disabilities. Her duties include, but are not limited to: providing overall direction to staff members in the Princeton and San Antonio offices; managing the group's budget, the development of proposal text, and metrics reporting; interviewing and selecting staff; establishing policies and procedures to institute efficient and effective work toward the excellence of test materials; and risk management. Prior to her time with ETS, Justine worked for three years with Questar Assessment Inc. as a project manager, and she managed the MI-Access project (Michigan's K–12 alternative assessment for students with cognitive disabilities). Justine holds a certificate in project management from Rutgers University and she is working to earn her certification in accessible information technology from the University of Southern Maine. She is knowledgeable of literary and Nemeth braille codes. Justine earned her B.A. in psychology and in archaeology from the State University of New York College at Potsdam.

Jennifer Schilke

Jennifer Schilke, Assessment Process Specialist, has more than 10 years of experience in process, product, and project management. Prior to joining ETS in 2013, Jennifer worked as a senior manager and product manager and also as technical support: security for COMCAST. She also has experience working as a functional/business analyst and as a senior software support/consultant for PROPHET 21. In her work for ETS, Jennifer utilizes her strong background in education, research, assessment, testing, and management. She earned her Ed.S. in school psychology from Rider University as well as her B.S. in English education from Mount Saint Mary's College in Emmitsburg, Maryland.